

Appln. No. 09/031,108  
CLAIMS SHEET

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2. (Twice Amended) A tension member for providing lifting force to a car of an elevator system, the tension member being engageable with a rotatable traction sheave of the elevator system, the tension member comprising:

a plurality of individual load carrying ropes; and  
a common layer of polyurethane coating in which the ropes are embedded,  
maintaining separation of the individual ropes and resisting longitudinal movement of the  
ropes relative to one another,

the tension member having a width w, a thickness t measured in the bending  
direction, and an engagement surface that receives force from the traction sheave as a  
result of traction between the engagement surface and the traction sheave, which force is  
transmitted to the ropes of the tension member by the polyurethane coating to thereby  
move the car, the engagement surface being defined on the polyurethane coating  
substantially by the width dimension of the tension member, wherein the tension member  
has an aspect ratio, defined as the ratio of width w relative to thickness t, greater than  
one, the tension member including a plurality of individual load carrying ropes encased  
within a common layer of coating, the coating layer separating the individual ropes,  
wherein the coating layer defines the engagement surface for engaging the sheave.

4. (Twice Amended) A tension member for providing lifting force to a car of an elevator system, the tension member being engageable with a rotateable traction sheave of the elevator system, the tension member comprising:

strands of non-metallic material; and  
a polyurethane coating encasing the strands,  
the tension member having a width w, a thickness t measured in the bending  
direction, and an engagement surface that receives force from the traction sheave as a  
result of traction between the engagement surface and the traction sheave, which force is  
transmitted to the non-metallic strands of the tension member by the polyurethane coating  
to thereby move the car, the engagement surface being defined on the polyurethane  
coating substantially by the width dimension of the tension member,

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wherein the tension member has an aspect ratio, defined as the ratio of width  $w$  relative to thickness  $t$ , greater than one, ~~wherein the tension member is formed from strands of non-metallic material~~.

11. (Twice Amended) A tension member for providing lifting force to a car of an elevator system, the tension member being engageable with a ~~non linear~~ contoured engagement surface of a -rotateable traction sheave of the elevator system, the tension member comprising:

a load-carrying member; and

a polyurethane coating encasing the load-carrying member,

the tension member having a width  $w$ , a thickness  $t$  measured in the bending direction, and an engagement surface that receives force from the traction sheave as a result of traction between the engagement surface and the traction sheave, which force is transmitted to the load-carrying member of the tension member by the polyurethane coating to thereby move the car, the engagement surface being defined on the polyurethane coating substantially by the width dimension of the tension member,  
wherein the tension member has an aspect ratio, defined as the ratio of width  $w$  relative to thickness  $t$ , greater than one, and wherein the engagement surface of the tension member is contoured to complement the ~~non linear~~ contoured engagement surface of the sheave.

13. (Twice Amended) A tension member for providing lifting force to a car of an elevator system, the tension member being engageable with a rotatable traction sheave of the elevator system, the tension member comprising:

a load-carrying member; and

a polyurethane coating encasing the load-carrying member,

the tension member having a width  $w$ , a thickness  $t$  measured in the bending direction, and an engagement surface that receives force from the traction sheave as a result of traction between the engagement surface and the traction sheave, which force is transmitted to the load-carrying member of the tension member by the polyurethane

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coating to thereby move the car, the engagement surface being defined on the polyurethane coating substantially by the width dimension of the tension member,  
wherein the tension member has an aspect ratio, defined as the ratio of width w relative to thickness t, greater than one, ~~the tension member including a coating layer formed from an elastomer.~~

16. (Twice Amended) A tension member for providing lifting force to a car of an elevator system, the tension member being engageable with a rotatable traction sheave of the elevator system, the tension member comprising:

a load-carrying member; and  
a polyurethane coating encasing the load-carrying member,  
the tension member having a width w, a thickness t measured in the bending direction, and an engagement surface that receives force from the traction sheave as a result of traction between the engagement surface and the traction sheave, which force is transmitted to the load-carrying member of the tension member by the polyurethane coating to thereby move the car, the engagement surface being defined on the polyurethane coating substantially by the width dimension of the tension member,  
wherein the tension member has an aspect ratio, defined as the ratio of width w relative to thickness t, greater than one, wherein the engagement surface is shaped to guide the tension member during engagement with the sheave.

71. (Amended) An elevator system including:

a car;  
a traction sheave; and  
a tension member engaged with the car, the tension member and engaged and driven by with the traction sheave, the tension member comprising  
a plurality of individual load carrying ropes, and

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a layer of polyurethane coating in which the ropes are embedded,  
maintaining separation of the individual ropes and resisting longitudinal  
movement of the ropes relative to one another.

the tension member having a width w, a thickness t, and an  
engagement surface that receives force from the traction sheave as a result  
of traction between the engagement surface and the traction sheave, which  
force is transmitted to the ropes of the tension member by the  
polyurethane coating to thereby move the car, the engagement surface  
being defined on the polyurethane coating substantially by the width  
dimension of the tension member.

wherein the tension member has an aspect ratio, defined as the ratio of width w relative to thickness t, greater than one, the tension member including:

an engagement surface defined by the width dimension of the tension member;  
a plurality of individual lead carrying ropes; and  
a layer of coating, the coating layer separating the individual ropes  
and defining the engagement surface for engaging the sheave.

72. (Amended) An elevator system including:

a car;

a traction sheave; and

a tension member engaged with the car, the tension member and engaged with and driven  
by the traction sheave, the tension member comprising  
strands of non-metallic material, and  
a polyurethane coating encasing the strands.

the tension member having a width w, a thickness t, and an  
engagement surface that receives force from the traction sheave as a result  
of traction between the engagement surface and the traction sheave, which  
force is transmitted to the non-metallic strands of the tension member by

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the polyurethane coating to thereby move the car, the engagement surface being defined on the polyurethane coating substantially by the width dimension of the tension member,

wherein the tension member has an aspect ratio, defined as the ratio of width w relative to thickness t, greater than one, the tension member including:

an engagement surface defined by the width dimension of the tension member;  
and

strands of non metallic material.

73. (Amendcd) An elevator system including:

a car;

a traction sheave having a non linearcontoured engagement surface; and  
a tension member engaged with the car, the tension member and engaged with and driven by the traction sheave, the tension member comprising

a load-carrying member, and

a polyurethane coating encasing the load-carrying member,

the tension member having a width w, a thickness t, and an engagement surface that receives force from the traction sheave as a result of traction between the engagement surface and the traction sheave, which force is transmitted to the load-carrying member of the tension member by the polyurethane coating to thereby move the car, the engagement surface being defined on the polyurethane coating substantially by the width dimension of the tension member.

wherein the tension member has an aspect ratio, defined as the ratio of width w relative to thickness t, greater than one, the tension member including:

an engagement surface defined by the width dimension of the tension member, and

wherein the engagement surface is contoured to complement the non-linearcontoured engagement surface of the sheave.

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74. (Amended) An elevator system including:

    a car;

    a traction sheave having an engagement surface; and

    a tension member engaged with the car, the tension member and engaged with and driven by the traction sheave, the tension member comprising

a load-carrying member, and

a polyurethane coating encasing the load-carrying member,

the tension member having a width w, a thickness t, and an engagement surface that receives force from the traction sheave as a result of traction between the engagement surface and the traction sheave, which force is transmitted to the load-carrying member of the tension member by the polyurethane coating to thereby move the car, the engagement surface being defined on the polyurethane coating substantially by the width dimension of the tension member,

wherein the tension member has an aspect ratio, defined as the ratio of width w relative to thickness t, greater than one, the tension member including

an engagement surface defined by the width dimension of the tension member, and

a coating layer formed from an elastomer.

75. (Amended) An elevator system including:

    a car;

    a traction sheave having an engagement surface; and

    a tension member engaged with the car, the tension member and engaged with and driven by the traction sheave, the tension member comprising

a load-carrying member, and

a polyurethane coating encasing the load-carrying member,

the tension member having a width w, a thickness t, and an engagement surface that receives force from the traction sheave as a result

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of traction between the engagement surface and the traction sheave, which force is transmitted to the load-carrying member of the tension member by the polyurethane coating to thereby move the car. the engagement surface being defined on the polyurethane coating substantially by the width dimension of the tension member.

wherein the tension member has an aspect ratio, defined as the ratio of width  $w$  relative to thickness  $t$ , greater than one, ~~the tension member including~~:

~~an engagement surface defined by the width dimension of the tension member, and~~

wherein the engagement surface is shaped to guide the tension member during engagement with the sheave.